

Bacteria, Fungi and Viruses, Sizes and Significance (Sizes in Micrometers - MM)

Note: Most are above 0.1M in size. None are below 0.01 in size.

| Organism | Microbial Group | Rod Length µm | Rod or Coccus Diameter µm | Source | Significance |
|------------------------------------|-----------------|------------------|------------------------------|---------------|---|
| <i>Absidia corymbifera</i> | Fungi | | 3.8 | Environmental | Zygomycosis |
| <i>Acetobacter Melanogenus</i> | Bacteria | 1.0-2.0 | 0.4-0.8 | | Strong beer/vinegar bacterium. |
| <i>Acinetobacter</i> | Bacteria | | 1.3 | Environmental | Opportunistic infections |
| <i>Acremonium spp.</i> | Fungi | | 2.5 | Environmental | Extrinsic Allergic Aveons |
| <i>Actinomyces israelii</i> | Bacteria | | 1.0 | Humans | Antinomycosis |
| <i>Adenovirus</i> | Virus | | 0.08 | Humans | Colds |
| <i>Alcaligenes Viscolactis</i> | Bacteria | 0.8-2.6 | 0.6-1.0 | | Causes ropiness in milk. |
| <i>Alkaligenes</i> | Bacteria | | 0.75 | Humans | Opportunistic infections |
| <i>Alternaria alternata</i> | Fungi | | 14.4 | Environmental | Mycotoxycosis |
| <i>Arenavirus</i> | Virus | | 0.18 | Rodents | Hemorrhagic fever |
| <i>Aspergillus spp.</i> | Fungi | | 3.5 | Environmental | Aspergillosis, Volatile Organic Compound |
| <i>Aureobasidium pullulans</i> | Fungi | | 5 | Environmental | Chromomycosis |
| <i>Bacillus anthracis</i> | Bacteria | 3.0-10.0 | 1.0-1.3 (1.1 average) | Environmental | Causes anthrax in mammals |
| <i>Bacillus Stearothermophilus</i> | Bacteria | 2.0-5.0 | 0.6-1.0 | | Biological indicator for steam sterilization |
| <i>Bacillus subtilis</i> | Bacteria | 2.0-3.0 | 0.7-0.8 | | Biological indicator for ethylene oxide sterilization |
| <i>Blastomyces dermatitidis</i> | Fungi | | 14 | Environmental | Blastomycosis |
| <i>Bordetella pertussis</i> | Bacteria | | 0.25 | Humans | Whooping cough |
| <i>Botrytis cinera</i> | Fungi | | 7 | Environmental | Extrinsic Allergic Aveons |
| <i>Cardiobacterium</i> | Bacteria | | 0.63 | Humans | Opportunistic infections |
| <i>Chaetomium globosum</i> | Fungi | | 5.5 | Environmental | Chromomycosis, Volatile Organic Compound |
| <i>Chiamydia psittaci</i> | Bacteria | | 0.3 | Birds | Psittacosis |
| <i>Chlamydia pneumoniae</i> | Virus | | 0.3 | Humans | Pneumonia |
| <i>Cladosporium spp.</i> | Fungi | | 9 | Environmental | Chromblastomycosis |
| <i>Clostridium botulinum (B)</i> | Bacteria | 3.0-8.0 | 0.5-0.8 | | Produces exotoxin causes botulism |
| <i>Clostridium Perinngens</i> | Bacteria | 4.0-8.0 | 1.0-1.5 | | Produces toxin causing food poisoning |
| <i>Clostridium tetani</i> | Bacteria | 4.0-8.0 | 0.4-0.6 | | Produces exotoxin causing tetanus |
| <i>Coccidioides immitis</i> | Fungi | | 4 | Environmental | Coccidiomycosis |

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|------------------------------|---------------|---------|----------|---------------|---|
| Coronavirus | Virus | | 0.11 | Humans | Colds |
| Corynebacteria diphtheria | Bacteria | | 1.0 | Humans | Diphtheria |
| Coxiella burnetii | Bacteria | | 0.5 | Cattle, sheep | Q fever |
| Coxsackievirus | Virus | | 0.027 | Humans | Colds |
| Cryptococcus neoformans | Fungi | | 5.5 | Environmental | Cryptococcosis |
| Diplococcus Pneumoniae | Bacteria | | 0.5-1.25 | | Causes lobar pneumonia |
| Echovirus | Virus | | 0.028 | Humans | Colds |
| Emericella nidulans | Fungi | | 3.3 | Environmental | Mycotoxycosis, Volatile Organic Compound |
| Epicoccum nigrum | Fungi | | 20 | Environmental | Extrinsic Allergic Aveons |
| Erwina aroideae | Bacteria | 2.0-3.0 | 0.5 | | Causes soft rot in vegetables. |
| Escherichia Coli (E Coli) | Bacteria | 1.0-3.0 | 0.5 | | Indicator of fecal contamination in water. |
| Eurotium spp. | Fungi | | 5.8 | Environmental | Extrinsic Allergic Aveons |
| Exophiala jeanselmei | Fungi | | 2 | Environmental | Chromomycosis |
| Francisella tularensis | Bacteria | | 0.2 | Wild animals | Tularemia |
| Geomyces pannorum | Fungi | | 3 | Environmental | Extrinsic Allergic Aveons |
| Haemophilus influenzae | Bacteria | 0.5-2.0 | 0.2-0.3 | | Causes influenza and acute respiratory infections |
| Haemophilus influenzae | Bacteria | | 0.43 | Humans | Meningitis, pneumonia |
| Haemophilus parainfluenzae | Bacteria | | 1 | Humans | Opportunistic infections |
| Hantavirus | Virus | | 0.07 | Rodents | Hantavirus |
| Helminthosporium | Fungi | | 12.5 | Environmental | Extrinsic Allergic Aveons |
| Histoplasma capsulatum | Fungi | | 3 | Environmental | Histoplasmosis |
| Influenza | Virus | | 0.1 | Humans, birds | Flu |
| Klebsiella pneumoniae | Bacteria | 5 | 0.4-0.5 | Environmental | Opportunistic infections, causes pneumonia and other respiratory inflammation |
| Lactobacillus Delbrueckii | Bacteria | 2.0-9.0 | 0.5-0.8 | | Causes souring of grain-mashes |
| Legionella pneumophila | Bacteria | | 0.6 | Environmental | Pontiac fever |
| Micromonospora faeni | Actinomycetes | | 1 | Agricultural | Farmers' lung, Hypersensitivity Pneumonitis |
| Micropolyspora faeni | Actinomycetes | | 0.69 | Agricultural | Farmers' lung, Hypersensitivity Pneumonitis |
| Moraxella catarrhalis | Bacteria | | 1.3 | Humans | Opportunistic infections |
| Moraxella lacunata | Bacteria | | 1 | Humans | Opportunistic infections |
| Morbilivirus | Virus | | 0.12 | Humans | Measles (rubeola) |
| Mucor plumbeus | Fungi | | 7.5 | Environmental | Mucormycosis |
| Mycobacterium avium | Bacteria | | 1.2 | Environmental | Cavitary pulmonary disorder |
| Mycobacterium intracellulare | Bacteria | | 1.2 | Environmental | Cavitary pulmonary disorder |
| Mycobacterium kansasii | Bacteria | | 0.86 | Unknown | Cavitary pulmonary disorder |
| Mycobacterium Tuberculosis | Bacteria | 1.0-4.0 | 0.2-0.5 | Humans | Hard swelling of body tissues. TB |

| | | | (0.86 average) | | |
|--------------------------------------|---------------|---------|-------------------|---------------|---|
| <i>Mycoplasma pneumoniae</i> | Bacteria | | 0.25 | Humans | Pneumonia |
| <i>Mycoplasma pneumoniae</i> (PPLO) | Bacteria | | 0.3-0.5 | | Smallest known free-living organism |
| <i>Neisseria meningitidis</i> | Bacteria | | 0.8 | Humans | Meningitis |
| <i>Nocardia Brasiliensis</i> | Actinomycetes | | 1.5 | Environmental | Pulmonary mycetoma |
| <i>Nocardia asteroides</i> | Actinomycetes | | 1.1 | Environmental | Nocardiosis |
| <i>Paecilomyces variotii</i> | Fungi | | 3 | Environmental | Mucormycosis |
| <i>Paracoccidioides brasiliensis</i> | Fungi | | 23 | Environmental | Paracoccidioidomycosis |
| Parainfluenza | Virus | | 0.22 | Humans | Flu |
| Paramyxovirus | Virus | | 0.23 | Humans | Mumps |
| Parvovirus B19 | Virus | | 0.022 | Humans | Filth disease, anemia |
| <i>Pediococcus acidilactici</i> | Bacteria | | 0.6-1.0 | | Causes mash spoilage in brewing |
| <i>Pediococcus Cerevisiae</i> | Bacteria | | 1.0-1.3 | | Causes deterioration in beer |
| <i>Penicillium</i> spp. | Fungi | | 3.3 | Environmental | Mycotoxigenesis, Volatile Organic Compound |
| <i>Phialophora</i> spp. | Fungi | | 1.5 | Environmental | Chromomycosis |
| <i>Phoma</i> spp | Fungi | | 3.3 | Environmental | Mucormycosis |
| <i>Pneumocystis carinii</i> | Bacteria | | 2 | Environmental | Pneumocystosis |
| Poxvirus - Vaccinia | Virus | | 0.23 | Agricultural | Cowpox |
| <i>Pseudomonas aeruginosa</i> | Bacteria | | 0.57 | Environmental | Opportunistic infections |
| <i>Pseudomonas mallei</i> | Bacteria | | 0.77 | Environmental | Opportunistic infections |
| <i>Pseudomonas pseudomallei</i> | Bacteria | | 0.57 | Environmental | Opportunistic infections |
| <i>Pseudomonas diminuta</i> | Bacteria | | 1.0-0.3 | | Test organism for retention 0.2 μ m membranes |
| Rhinovirus | Virus | | 0.023 | Humans | Colds |
| <i>Rhizopus stolonifer</i> | Fungi | | 8 | Environmental | Zygomycosis |
| <i>Rhodotorula</i> spp. | Fungi | | 14 | Environmental | Extrinsic Allergic Avelons |
| <i>Salmonella enteritidis</i> | Bacteria | 2.0-3.0 | 0.6-0.7 | | Causes food poisoning |
| <i>Salmonella enteritidis</i> | Bacteria | 2.0-3.0 | 0.6-0.7 | | Causes food poisoning |
| <i>Salmonella hirschfeldii</i> | Bacteria | 1.0-2.5 | 0.3-0.5 | | Causes enteric fever |
| <i>Salmonella typhimurium</i> | Bacteria | | 1.0-1.5-0.5 | | Causes food poisoning in man |
| <i>Salmonella typhosa</i> | Bacteria | 2.0-3.0 | 0.6-0.7 | | Causes typhoid fever |
| <i>Sarcina maxima</i> | Bacteria | | 4.0-4.5 | | Isolated from fermenting malt mash |
| <i>Scopulariopsis</i> spp. | Fungi | | 6 | Environmental | Onychomycosis |
| <i>Serratia marcescens</i> | Bacteria | 0.5-1.0 | 0.5 | | Test organism for retention of 0.45 μ m membranes |
| <i>Serratia marcescens</i> | Bacteria | | 1.3 | Environmental | Opportunistic infections |
| <i>Shigella dysenteriae</i> | Bacteria | 1.0-3.0 | 0.4-0.6 | | Causes dysentery in man |

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|----------------------------|---------------|--|--------------------------|---------------|---|
| Sporothrix schenckii | Fungi | | 6.5 | Environmental | Sporotrichosis |
| Stachybotrys spp. | Fungi | | 5.7 | Environmental | Stachybotryotoxicosis |
| Staphylococcus Aureus | Bacteria | | 0.8-1.0 | Humans | Causes pus forming infections, opportunistic infections |
| Streptococcus lactis | Bacteria | | 0.5-1.0 | | Contaminant in milk |
| Streptococcus pneumoniae | Bacteria | | 0.9 | Humans | Pneumonia, otitis media |
| Streptococcus pyogenes | Bacteria | | 0.6-1.0 (0.9 average) | Humans | Causes pus forming infections, scarlet fever, pharyngitis |
| Thermoactinomyces sacchari | Actinomycetes | | 0.86 | Agricultural | Bagassosis |
| Thermoactinomyces vulgaris | Actinomycetes | | 1 | Agricultural | Farmers' lung, Hypersensitivity Pneumonitis |
| Thermomonospora viridis | Actinomycetes | | 0.6 | Agricultural | Farmers' lung, Hypersensitivity Pneumonitis |
| Togavirus | Virus | | 0.063 | Humans | Rubella (german measles) |
| Trichoderma spp. | Fungi | | 4.1 | Environmental | Mycotoxycosis, Volatile Organic Compound |
| Ulocladium spp. | Fungi | | 15 | Environmental | Extrinsic Allergic Avelons |
| Varicella-zoster | Virus | | 0.3 | Humans | Chickenpox |
| Wallemia sebi | Fungi | | 3 | Environmental | Extrinsic Allergic Avelons |
| Yersinia pestis | Virus | | 0.75 | Humans | Pneumonic plague |

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